

Appl. No.: 10/663,600
Arndt. dated 07/21/2005
Reply to Official Action of June 30, 2005

REMARKS/ARGUMENTS

Applicants appreciate the thorough examination of the present application, as evidenced by the first Official Action. Also, Applicants appreciate the Examiner taking the time to conduct a telephone interview with Applicants' undersigned attorney regarding the first Official Action. The first Official Action rejects Claims 1-3, 9 and 15-17 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,565,783 to Lau et al. The first Official Action then rejects the remaining claims, namely Claims 4-8, 10-14 and 18-22, under 35 U.S.C. § 103(a) as being unpatentable over the Lau patent, in view of U.S. Patent No. 6,385,561 to Soraghan et al. As explained below, however, Applicants respectfully submit that the claimed invention of the present application is patentably distinct from the Lau and Soraghan patents, taken individually or in combination. Accordingly, Applicants respectfully traverse the rejections of the claims as being anticipated by the Lau patent, or rendered obvious over the Lau patent in view of the Soraghan patent. In view of the remarks presented herein, Applicants respectfully request reconsideration and allowance of all of the pending claims of the present application.

A. Claims 1-3, 9 and 15-17 are Patentable over Lau

The Lau patent discloses a fault sensor device having a radio transceiver, where the device is configured to detect and distinguish abnormal current and voltage events on an alternating current overhead and underground transmission line or distribution line. As disclosed, the fault sensor device is contained in an elongated molded plastic housing, and includes a current sensor and a voltage sensor connected in proximity to the transmission or distribution line for monitoring a current through the power line and a relative line voltage, respectively. The fault sensor device also includes a processor that is responsive to digital signals representative of the current and voltage to detect an abnormal condition therefrom, as well as distinguish the fault from a plurality of types of faults. A transmitter of the fault sensor device can then transmit the fault information to a remote location. The fault sensor device further includes a power switcher for controlling power to various components of the device, including the transmitter. Thus, the fault sensor device can be operated in a "sleep mode" where power is switched off to the transceiver (via a transistor), and then transitioned into an active

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mode when a fault condition has occurred or when there is a system functionality check, with power being switched on to the transceiver when the device is operated in the active mode.

Independent Claim 1 of the present application recites a system for remotely detecting and locating damaged conductors, where the system includes at least one slave controller and at least one damaged wire detector. As recited, the slave controller(s) are disposed proximate at least one load and are electrically connected to the load(s) via at least one conductor, and the damaged wire detector(s) are electrically connected to the conductor(s) between the slave controller(s) and the load(s). The slave controller(s) include solid-state switch(es) capable of controllably altering the input current to the load(s). In addition, the slave controller(s) include measuring element(s) for measuring at least one parameter associated with the load(s) and the solid-state switch(es). In this regard, the solid-state switch is capable of controllably altering the input current to the load(s) according to the parameter(s). In addition, the damaged wire detector(s) are capable of detecting and/or locating at least one damaged conductor.

As suggested above, like independent Claim 1, the Lau patent relates to monitoring conditions in a power system. However, the Lau patent does not teach or suggest a system including a slave controller having a solid-state switch and measuring element, and a damaged wire detector, configured and capable of operating in the same manner as recited in independent Claim 1. In this regard, Applicants initially notes that during the aforementioned telephone interview between Applicants' undersigned attorney and the Examiner, the Examiner intimated or otherwise acknowledged that the Lau patent inherently discloses a load, such as a building or other power-consuming location, which receives power from the overhead and underground transmission line or distribution line of a power transmission and distribution system. With this interpretation, Applicants respectfully submit that the Lau patent does not teach or suggest a solid-state switch capable of controllably altering input current to a load, as is the solid-state switch of independent Claim 1. The Lau patent does disclose a power switcher that one could argue corresponds to a solid-state switch (as alleged in the first Official Action). Even in this instance, however, the power switcher is not disclosed as controlling input current to a load that receives power from the overhead or underground transmission line or distribution line. Rather,

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as explained above, the power switcher controls power to various components of the fault sensor device that includes the power switcher.

Also in contrast to the system of independent Claim 1, the Lau patent does not teach or suggest measuring element(s) for measuring parameter(s) associated with the load and the solid-state switch, and accordingly, that a solid-state switch alters current to a load according to the parameter(s). Again, the Lau patent does disclose a current sensor and a voltage sensor that one could argue correspond to measuring elements (as alleged in the first Official Action). Even under this interpretation as well as the previous interpretation of the power switcher corresponding to a solid-state switch, however, the Lau patent does not disclose that either the current sensor or voltage sensor measures anything associated with the power switcher. Instead, as explained above, the current and voltage sensors of the fault sensor device monitor current through a power line and a relative line voltage, respectively.

In further contrast to the system of independent Claim 1, the Lau patent does not teach or suggest a damaged wire detector electrically connected to a conductor between a slave controller and load. Continuing the above interpretation of the Lau patent as set forth in the first Official Action where the disclosed power switcher and current/voltage sensors correspond to the recited switch and measuring elements, respectively, one could argue that the power switcher and current/voltage sensors collectively correspond to a slave controller (the slave controller of the claimed invention recited as comprising one or more solid-state switches and measuring elements). It could further be argued that the microprocessor disclosed by the Lau patent corresponds to a damaged wire detector as the microprocessor is disclosed as being configured to detect abnormal current/voltage conditions. Under this interpretation, and considering the disclosed current/voltage sensors as being located proximate the overhead or underground transmission line or distribution line delivering power to a load, however, the Lau patent does not disclose that the microcontroller is electrically connected between the power switcher/sensors and the load. Rather, as disclosed by the Lau patent, the microcontroller is disclosed as being electrically connected between the power switcher and sensors.

Applicants therefore respectfully submit that independent Claim 1, and by dependency Claims 2-8, is patentably distinct from the Lau patent. Applicants also respectfully submit the

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method and system of independent Claims 9 and 15 recite subject matter similar to that of independent Claim 1. For example, independent Claims 9 and 15 recite a slave controller or switch controlling input current to a load, such as by preventing or permitting current to flow to a load. Also, for example, independent Claim 9 recites monitoring parameter(s) associated with the switch and load; and independent Claim 15 recites a damaged wire detector electrically connected between a slave controller and load. Accordingly, Applicants respectfully submit that independent Claims 9 and 15, and by dependency Claims 10-14 and 16-22, are also patentably distinct from the Lau patent, for at least the same reasons given above with respect to independent Claim 1. Thus, Applicants respectfully submit that the rejection of Claims 1-3, 9 and 15-17 as being anticipated by the Lau patent is overcome.

B. Claims 4-8, 10-14 and 18-22 are Patentable over Lau/Soraghan

Claims 4-8, 10-14 and 18-22 currently stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Lau patent, in view of the Soraghan patent. As explained above, independent Claims 1, 9 and 15. Applicants further respectfully submit that the Soraghan patent does not teach or suggest the claimed invention of independent Claims 1, 9 and 15, or cure the deficiencies of the Lau patent with respect to independent Claims 1, 9 and 15. Accordingly, Applicants respectfully submit that the claimed invention of independent Claims 1, 9 and 15, and by dependency Claims 4-8, 10-14 and 18-22, is patentably distinct from the Lau patent and the Soraghan patent, taken individually or in combination. Thus, Applicants further respectfully submit that the rejection of Claims 4-8, 10-14 and 18-22 is also overcome.


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CONCLUSION

In view of the remarks presented above, Applicants respectfully submit that the present application is in condition for allowance. As such, the issuance of a Notice of Allowance is therefore respectfully requested. In order to expedite the examination of the present application, the Examiner is encouraged to contact Applicants' undersigned attorney in order to resolve any remaining issues.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

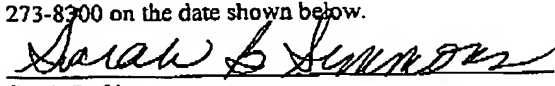
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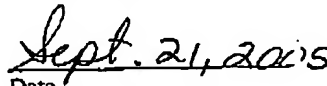

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Date Sept. 21, 2005